DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 6-7.11-16, 21, 30-31 and 36-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Prater et al. (USPN 20020092340) in view of Bloom et al. (US 5,488,305).

Prater discloses a calorimetric device comprising:

a U shaped calorimeter tube (para 91) made of silicon (para 59) and having an inlet end (28) and an outlet end (29), and mounted onto a support at the inlet end and the outlet end wherein the calorimeter tube comprises a bimetallic coating layer comprising a metal (para 8), wherein the calorimeter tube bends in response to a temperature change in the calorimeter tube due to different thermal expansions of the calorimeter tube and the coating laver (para 8);

b) a capacitive sensor (69) that detects the bending of the calorimeter tube due to different thermal expansions of the calorimeter tube and the coating layer bimetallic layer; and c) an integrated heating device (28) that provides current through the bimetallic coating layer to heat the calorimeter tube and maintain a substantially constant temperature based on detected bending of the calorimeter tube coating layer due to the different thermal expansions of the calorimeter tube and coating layer (para 71).

Prater does not disclose the coating layer is aluminum.

Bloom discloses a capacitive cantilever system that comprises a silicon cantilever 134 disposed to be displaced as a consequence of the capacitive force between the tip member and sample 110. The tip member 130 is typically formed from a conductive material such as aluminum or coated with a conductive material. The tip

member 130 may be integral part of the cantilever 134. It would have been obvious to one having an ordinary skill in the art at the time of the invention to modify Prater to employ an aluminum coating as the conductive material because aluminum is an excellent conductor of heat and is different material that the silicon cantilever which would allow different thermal expansion of the two materials as the cantilever generates heat during a reaction.

Response to Arguments

Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SAM P. SIEFKE whose telephone number is (571)272-1262. The examiner can normally be reached on Monday, Wednesday, Thursday and Friday 8am to 6:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, InSuk Bullock can be reached on 571-272-5954. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/SAM P SIEFKE/
Primary Examiner, Art Unit 1772